# RUBBER JOURNAL

# INDEX

**Index to volumes:**

**152 (Jan-Dec) 1970 153 (Jan-Dec) 1971 154 (Jan-Dec) 1972**

# INDEX TO VOLUME 152 (Jan-Dec) 1970

Subject matter for Views and Reviews and Trends and Forecasts (Economics) has not been broken down under specific headings. Also note that the Leader page is unclassified and appears on page 7 of each issue.

## American Letter


Agreements run out in April —another round of rubber strikes? ... Jan 12
Airbag controversy awaits showdown ... Aug 14
Air bags for all passenger cars ... July 26
Air Force buys Goodyear's foam-filled tyres ... Feb 12
Alsport switches to rubber springing for sled tracks... Jan 14
American reaction to Dunlop-Pirelli merger ... Apr 29
A new cord fatigue tester ... July 28
Asymmetric tread for Firestone's new snow tyre ... Nov 19
AU offers rubber engineers a bachelor's course ... Oct 35
BICC/ASR/GC deal may well go through ... Sept 26
BICC deal not settled... May 19
Bridgestone's sales efforts grow ... July 28
Coated fabrics boom continues for Firestone ... Feb 13
Corfam—Du Pont falls back to regroup ... Feb 12
Cutting down development time for tyres ... Nov 20
Deadline for tyre listing ... Dec 20
DoT to instigate controls on brake hoses ... Nov 22
Dow Corning retardant silicones ... Jan 15
Economics of rubber rail crossings ... May 21
Ex-Dunlop men start new rubber firm ... Nov 22
FTC finally raps Firestone over ad claims ... Sept 25
FTC gets tough over Firestone advertisements ... Jan 14
Fabritanks help out Alaska's frozen oil drillers ... Sept 25
Firestone Canada keeps the wheels turning at Churchill ... Oct 33
Firestone's earnings drop ... Oct 34
Firestone—'pour a tyre' idea ... Mar 12
Firestone wins again in Indianapolis 500 ... July 26
First Carveyor installation for San Jose ... Apr 31
General checks each tyre in original equipment plant . 34
General's South African victory reversed ... May 21
General Tire & National-Standard to build radial tyres ... Mar 10
Goodrich starts work on its epdm plant ... Jan 14
Goodyear announces all-steel passenger production tyre Nov 16
Goodrich claims first for its passenger radials... Aug 12
Goodyear in, Goodrich out of Japanese sr ... Oct 34
Goodyear-Michelin to go ahead on French plant ... Nov 22
Goodyear plans run into snags ... July 24
Goodyear sues Mother over Polygas mark ... Feb 13
Goodyear sues UK firm over trade mark ... Sept 26
Goodyear's Terra-Tire used on dune buggy ... Jan 13
General Tire's patent suit moves towards final stages Aug 10
Goodyear to build Congo tyre plant ... Oct 33
Large tyre expansions ... May 21
Larger airplane brake drums claim for Firestone's LXX Apr 31
Limitations of Firestone's foam-filled tyres ... May 19
Little success for Goodyear Aug 10
Lower earnings for third quarter ... Dec 22
Lower half-year profits due to Akron's labour disputes Sept 22
Mansfield puts up profits as well! ... Apr 34
Mohawk's West Helena tyre plant problems ... Oct 34
Monsanto shows new 'fatigue to fail' tester ... Oct 35
More DoT suits against US tyre makers ... Jan 12
More details of Monsanto's spun steel ... Dec 23
More non-tyre acquisitions by Mohawk ... Jan 15
More rubber crossing for Defense depot ... Nov 22
NHSB may back down on air-bag legislation ... Nov 20
National Standard steel—new contender in tyre cord stakes ... Mar 10
New contracts with the United Rubber Works ... Aug 12
New sales record as Goodyear tops three billion ... Mar 13
New sales records predicted for 1970 ... Jan 15
Old tyres may find use as fishing reefs ... Nov 19
Only bicycle tyre producers left ... May 21
Ontario bans studded tyres . Nov 16
Ontario's stud ban causes repercussions ... Dec 23
Orsay technical service lab to open soon ... Feb 13
PPG to double glass cord plant capacity ... Feb 13
Packed air as a tool in containerisation ... Nov 20
Passive restraint date postponed to mid 1973 ... Dec 23
Pbd reference standards from Phillips ... Feb 12
Peace reigns in Akron for further 3 years—it is hoped July 22
Phillips develops process for high-heat polymers ... Nov 22
Pneumatic tyres for Americans' first lunar wheels ... Dec 20
Price increases soldier on . Aug 12
Product sales are high . . . and rising ... Feb 10
RMA forms an environmental committee ... Oct 35
Recall of 10,000 Wolverhampton-made tyres ... Aug 12
Recall tyres for use on the farm ... Feb 12
Record sales predicted for winter tyres ... Oct 34
Repairing detached retinas with natural latex balloons Aug 14
Rubber-fabric makers may get a boost ... May 21
Rubber consumption predicted at 6.2% increase... Jan 13
Settlement in sight over retread tyres ... Apr 31
Starch filler question brought up again ... Sept 26
Stretch cord for radial ply tyre belts ... July 28
Ten years' work brings Goodrich Navy contract ... Nov 20
The blanket challenges the bag as a passive restraint system ... Sept 22
The recall bill is passed ... July 24
The spectre at the ACS feast —austerity ... Dec 25
Two new members for Akron U's Hall of Fame ... Nov 20
Tyre makers dispute Government's claims over costs and prices ... Oct 30
Tyres replace tracks on North American log skidders ... May 22
UAW strike hits US tyre makers ... Nov 16
US Navy Launcher-Retriever uses giant tyres ... Jan 15
US top ten in tyres ... May 21
Uniroyal postpones its footwear plant closure ... Sept 25
Ups and Downs of the General Services Administration's stockpile ... Apr 29
Urethane foam suits recorded —no action yet ... Feb 13
Wage negotiations to start next month ... Feb 12


## Articles


Adsorption of Aerosol OT by carbon blacks, The ... Apr 49
Barwell's latest—a twin ram continuous rubber extruder Oct 85
Changing role for the IISRP July 52
Chemical probes ... Nov 43
Chloroprene blends for tyres June 48
Commercial Exploitation of RAPRA's Research, The... Mar 49
Continuous cure by micro wave ... Mar 19
Dunlop-Pirelli—a union for expansion ... Apr 41
Excellent progress in all groups—A report on the ISO TC-45 meeting ... Mar 32
Export and Import of rubber machinery ... Oct 56
Firestone to build tyre coking plant ... Oct 92
Footwear 1—Machinery trends and developments ... Apr 55
Footwear 2—Materials, trends for sole and heel ... Apr 61
Footwear 3 — Poromerics, their structure and use ... Apr 72
Footwear 4 — Manufacturing and material trends ... Apr 89
French rubber industry—'outlook remains calm', The . June 37
FYT introduces new injection range for rubber ... Oct 67
General Tire's UK patent case. A report ... Feb 32
How Shell tests its tyre rubbers ... Nov 49
Heavy truck tyres of synthetic rubber ... May 60
IRI's award winners ... Dec 64
Ideas for urban transportation — Goodyear's 'Carveyor' ... July 71
Identification of carbon blacks in vulcanisates, The ... July 65
Interrelation between data from different physical tests ... Aug 33
1969 International conference report from Moscow. Part one ... Jan 27
1969 International conference report from Moscow, Part two ... Feb 19
1969 International conference report from Moscow. Final part ... Mar 60
1970 International conference report. Part I ... July 44
1970 International Rubber conference report. Conclusion ... Aug 58
Macro molecules at Leiden Oct 87
Major production advance at Dunlop Belting plant ... Feb 37
Microwaves in the rubber industry ... Oct 43
More grip with radials—on the European tyre market; hello steel and goodbye polyesters? ... Aug 51
National Standard's new line in tyre machines ... Oct 37
New cord line as part of Dunlop Cork's expansion . Aug 56
Pirelli's Vizzola test tracks —an open-air tyre laboratory ... July 30
Production of rubber articles by the electroionic deposition of rubber polymer from latex, The ... June 52
Productivity of rubber calendering ... Dec 31
RAPRA—an overview ... Mar 35
RAPRA's latest fluid beds ... Oct 71
Rubber and the margin squeeze ... Dec 61
Seal symposium—a report on the one-day RAPRA meeting on rubber seals ... June 49
SI units metrification and the rubber industry ... Nov 66
Studies of oil extended sbrs Jan 36
Synthetic rubber—in Europe Sept 60
Taylor's know-how helps the tyre makers ... Sept 75
The compounder and the computer ... Aug 41
The next GP rubber? ... Oct 73
The progress of SMR ... Nov 72
Thin silicone membranes ... Sept 78
Torsion pendulum, The ... Sept 81
Truck tyre groove cracking, theory and practice ... Dec 36
Use of epdm rubber in tyre manufacture, The ... June 60
Use of radio waves as a compounding tool ... May 47
Variations on a rheometer theme by Monsanto ... Oct 80
Volume changes of nitrile rubbers in mineral oils ... May 37
Ways of speeding up the work of the BSI ... June 28
Whither the wheel? A report on the recent 'Rubber in Transport Engineering' conference organised by NRPRA ... June 72
World synthetic rubber ... Sept 34


## Authors


Anders, Dietmar ... Mar 19
Anderson J. G. ... Jan 36
Arenzon, N. M. ... May 60
Blackley, Dr. D. C. ... Oct 87
Blow, C. M. ... May 37
Boguslavskii, D. B. ... June 60
Buiko, G. N. ... May 60
Chernaya, V. V. ... June 52
Clapson, B. E. ... Dec 36
Collingwood, John A. ... Sept 60
Davey, A. B. ... Mar 49
Evstratov, V. F. ... June 60
Furuta, Isao ... Aug 33
Gergen, W. P. ... Sept 81
Gillingham, C. R. ... July 65
Grubman, Yu. V. ... June 52
Gunter, W. D. ... Aug 41
Hall, E. E. ... Apr 55
Harwood, J. A. C. ... Jan 36
Keelen, T. L. ... Sept 81
Kellett, P. H. ... Apr 61
Kristensen, I. M. ... Aug 41
Kvashenko, Yu. Yu. ... May 47
Lake, G. J. ... Dec 36
Lamond, T. G. ... Apr 49, July 65
Lee, T. C. P. ... Nov 43
Lyalin, A. A. ... June 60
Maizelis, B. A. ... June 52
Matthews, D. ... Dec 31
Mekel, A. L. ... Nov 49
Mirokhina, G. A. ... June 52
Moakes, R. C. ... Mar 32
Moseley, R. J., translator May 47, 60, June 52, 60
Ninomya, Kazuhiko ... Aug 33
Pavel'er, V. N. ... May 47
Payne, A. R. ... Apr 89
Price, C. R. ... Apr 49
Rellage, J. ... Nov 49
Roat, T. F. ... May 47
Ruebensaal, Clayton F. ... Sept 34
Toles, George E. ... Oct 92
Walker, J. ... Aug 41
Watson, V. J. ... Sept 78
Whittaker, R. E. ... Apr 89
Wood, E. C. F. ... Jan 36
Zaiteva, V. D. ... May 47


## News In Camera


Adiprene urethane rubber grips ... Oct 52
Advance in natural rubber yield stimulation ... Aug 31
Avon introduces flotation bag Mar 9
BRMA's president receives a silver salver ... May 16
BTR belting at National Coal Board jetty ... May 14
BTR lines tanks for British Steel ... Nov 32
Barwell preformer flown to Baltimore ... Jan 10
Conveyor belt depot for CMT Apr 11
Deflashing plant from Air-Products ... Apr 12
Dunlop conveyor belting in Osaka ... June 13
Dunlop grg produces one-piece floor mat for cars ... Nov 33
Dunlop's Huntsville tyre factory opened ... June 14
Dunlop Stargilde at Expo '70 Apr 12
Dunlop wins contract from Royal Canadian Air Force Feb 40
Fine wire truck radials from Fort Dunlop ... Apr 11
Geigy expands pigment division ... July 14

Goodyear Aviation Products Div. test giant tyres ..... May 14
Goodyear's fastest tyres on earth ..... Dec 15
Goodyear medal awards ..... July 15
Goodyear Terra Tyre aids pollution researchers ..... Dec 15
Hi-Flex helps to insulate Gulf's refinery tanks ..... Dec 14
Hi-Flex used on 'John Murray' ..... Mar 9
Hypalon synthetic rubber hose fitted to London buses ..... Nov 32
IRI medallists presented ... May 16
Large diameter suction hose from Goodyear ..... June 14
Lintafoam installs narrow backing machine ..... May 14
Longannet power station using Dunlop belting ..... June 13
Microcellular pvc replaces rubber at Spencer's slipper factory ..... Oct 53
Midland Silicones introduces heat-cured stocks ..... July 14
Morgan Fairest/Borg-Warner agreement ..... Apr 11
Neoprene cables help to keep cars warm ..... Nov 33
New 'special' doors for Dunlop ..... Oct 53
New transport depot for Central Manufacturing & Trading Co. ..... Aug 30
Photo-electric equipment to aid bonus scheme ..... Aug 30
Pirelli calendar photography Jan 10
Pirelli's new giant radial ply tyre ..... Oct 53
Polymer swell test equipment June 13
Polysar butyl rubber sheet ... Feb 40
Powder form nr announced at new H & C laboratory opening ..... Aug 31
Presentations for Dunlop's winners ..... Jan 10
R.F.D. introduces inflatable escape slide ..... Mar 9
Ripple trays for butyl ..... July 14
Rubber hose for pouring concrete ..... Oct 52
Runnymede / Dant release coatings ..... Oct 53
Silent Channel chooses Schiesser batch-offs ..... Dec 14
Silicone for shock absorbers July 15
Six foot diameter rubber seals from Barwell ..... Nov 32
Smokeless incineration of tyres ..... July 15
Triulzi im machine for sole moulding ..... June 14
USCG ADAPT system uses rubber bags ..... Dec 15
Union Jack balloon for Expo 70 ..... Feb 40
Urethane combs for escalators ..... Dec 15
Vredestein rubber barrage used in Holland's rivers ... Nov 33


## News Briefs


**Awards**
Gold Medallion for export to Greengate & Irwell ..... Apr 9
Loughborough University to confer honorary degree ... June 9

**Queens Awards**
ISR, technological innovation May 9
Dunlop, exports and technological achievement ..... May 9
BTR, technological innovation May 9
Butyl Products: export achievement ..... May 9
Viking Engineering: export award ..... May 9
Portex, award for exports ... May 9
Deering Milliken: export achievement ..... May 9

**Book Sales**
Maclaren group sells to Elsevier ..... Feb 8

**Book Review**
The analysis of rubber and rubber-like polymers ..... May 24

**Company News and Comment**
Agreement between Bakelite Xylonite and Mitsubishi Rayon ..... July 10
Anchor Chemical forms South African subsidiary ..... Mar 8
Anchor forms special machinery division ..... Apr 9
Angus/Hawken tie-up ..... July 10
BP Chemicals to build synthetic ethanol plant..... Feb 8
BP plastics to expand Breon facilities ..... June 8
Barwell opens Swiss depot . Aug 8
Bayer to build second plant in Barcelona ..... Apr 9
Bayer to expand trimethylol propane plant ..... Oct 11
Bayer/Shell to build in Antwerp ..... Feb 8
Bell & Howell/Du Pont ..... Dec 10
CIBA UK and Geigy (UK) merger ..... Dec 10
Bibby Chemicals expands ... June 8
Billiton changes name to M & T International NV ... Oct 11
British Enkalon opens plant at Antrim ..... Oct 11
British Vita sells factice concern to Anchor ..... Aug 9
British Vita to expand in S. Wales ..... Sept 9
Brown relinquish control of Bridge to Farrel ..... July 9
Calatrava expands capacity for sbr ..... July 12
Compoflex extends its Delph, Lancs factory ..... Dec 9
Conoco buys into Concarb . June 8
Croxton & Garry/Plastichem July 10
DSM to build butadiene plant ..... May 8
Daniels Hamilton merger ... Oct 10
Deering Products moves ... Oct 12
Degussa Antwerpen opens new plant ..... Nov 12
Dowty Seals to build extension ..... Feb 8
Dunlop/Angus reorganise ... Dec 10
Dunlop profits and turnover . May 9
Dunlop rationalisation ..... Aug 9
Dunlop Semtex/Union Carbide ..... Jan 8
Dunlop to expand in Trinidad Apr 9
Dunlop to withdraw from Formula I and II racing ... Aug 9
Dunlop trading results ..... Nov 12
Dunlop's second major US tyre factory ..... May 9
Electrical Projects Group, Dunlop ..... Jan 8
Enka steel cord expansion . Sept 9
Esso Chemical's Fawley plant to expand ..... Mar 8
Expansion of Dunlop Nigerian July 12
Expansion of Goodyear/Toyobo plant ..... July 12
Fram Filters opens new HQ June 8
Francis Shaw buys Davy Plastics Machinery ..... Apr 8
General Engineering / Titan Vacuum Engineering ..... Jan 8
Giegy, J. R./CMC agreement Aug 9
Goodyear bid for Vredestein June 9
Greengate & Irwell develops instant airstrip ..... Nov 10
ICI coatings ..... Sept 9
ICI—Degussa ..... Jan 8
International Colloids new service ..... July 10
ISR and Continental form joint company for UK black plant ..... Feb 8
Lastex Yarn & Lactron Thread to close ..... May 9
Lintafoam to split up ..... Mar 8
Metering Pumps/Gallaher ... Jan 9
Michelin to expand in UK ... Aug 8
National Tyre Service ..... Nov 12
New technical block for St. Albans Rubber Co. ..... Mar 8
New tyre cord plant ..... June 9
Nippon Kayaku/Noury & Van Der Lande ..... July 10
Nippon Petrochemicals and Polysar joint venture ..... Dec 10
Philblack to construct new reactor ..... July 10
Phillips-Woodhey tie up ..... Apr 9
Pirelli-General to modernise plant ..... Aug 9
Pirelli increases total tyre sales ..... Oct 11
Pirelli moves to Watford ... Nov 12
Polymer (SAF) to build rubber latex plant ..... Feb 8
Polymon purchases Caplin & Co. ..... May 9
Polysar acquires Solar Chemical ..... Oct 11
Power-Gas forms new division June 9
SAFIC/Alcan agreement ... July 10
Saspol (UK) ..... Oct 11
Shell-Mex and BP set up new unit ..... July 10
Slater Walker reorganise ... Jan 9
Southern Instruments acquires Shandon Scientific Dec 9
Steel cord joint company ... Mar 8
Taylor has purchased Castellazzo ..... Oct 11
Tioxide to expand Calais factory ..... Nov 12
Werner & Pfleiderer / Hommrich ..... Jan 8
William Mallinson/BTR Leyland Industries agreement July 10
Woodville expands ..... Feb 8

**Conferences, Exhibitions, Meetings & Courses**
Australian Rubber Technology Convention ..... Aug 9
Europlastique to be held in June ..... Jan 9
5th International Conference on Fluid Sealing ..... Sept 9
International Institute of Synthetic Rubber Producers Inc. holds 12th annual meeting ..... Dec 9
International Rubber conference ..... Aug 9
Micro 70, international exhibition and symposia on microscopy ..... Sept 9
NRPRA Rubber/in Transport Engineering Conference ... Jan 9
National College of Rubber Technology to hold a series of courses ..... Mar 8
National College of Rubber Technology supports research project ..... Jan 8
Poromerics conference ..... Dec 9
RAPRA introduce series of one-day meetings ..... April 9
RAPRA's polymer characterisation service starts ..... Oct 12

**Contracts, Orders, Deals, Exports**
Angus wins order from Australian Army ..... Aug 9
Baxter obtains order from Poland ..... Oct 12
British Vita gets contract from Department of Health ..... July 12
Brux sales ..... Sept 9
Computer line for Michelin . June 8
Dowty to supply sr seals for Boeings ..... Jan 9
Dunlop contract for 30 liferafts ..... Nov 9
Dunlop exports up 22% ..... Sept 9
Dunlop places contract with Vickers ..... May 8
Dunlop's £300,000 order for floating hose ..... Apr 9
Dunlop Singapore order ..... Oct 11
Dunlop Sports export record Mar 8
DuPont sales of over $600m Sept 9
Fire hose contract from Egypt for BTR Leyland ..... Dec 8
Francis Shaw sell £600,000 of equipment to Chile ..... Mar 8
GEC-Elliott receives orders from Michelin ..... Aug 9
Guthrie Pullen exports Dynat plants ..... Mar 8
Instem wins computer orders June 8
Leyland/Moseley/Uniroyal get NCB contracts ..... Dec 8
Matthew Hall awarded contract by Doverstrand ..... July 12
Monsanto buys from GEC-Elliott ..... Dec 8
Pirelli General £600,000 contract ..... Dec 9
Sbr plant for Revinex Australia ..... Oct 11
Vacu-Lug Tyres receive £100,000 order ..... Nov 9
Vickers receives first West German order ..... Nov 9
Wellman to supply dust collector plant ..... Aug 9

**Equipment**
Accumulators ..... Aug 8
Balances ..... Sept 8
Balances ..... Dec 8
Belt conveyor ovens ..... May 8
Blade grinder ..... Oct 8
Cleaner ..... Sept 8
Coilers ..... July 9
Controller, temperature ..... Jan 8
Controllers ..... July 9
Corner press ..... Nov 8
Dispenser ..... May 8
Driers ..... Jan 8
Dynamic testing ..... Dec 8
Formulae programmer ..... Sept 8
Largest 'pot heater' for Goodyear ..... Oct 12
Miniature temperature controller ..... Jan 8
Modulus tester ..... Nov 8
pH meter ..... Dec 8
Particle computer ..... Dec 8
Polyester blender ..... Oct 10
Pumps ..... Aug 8
Rigidimeter ..... Dec 8
Schiesser processing machinery ..... June 8
Simulated Jumbo lifting test for Dragonjacks at Orly ... Dec 10
Switches ..... Jan 8
Tensile tester ..... Nov 8
Test chambers ..... Nov 9
Testing equipment ..... May 8
Transmitter ..... Nov 8
Tyre builder ..... Aug 8
Tyre servicing ..... Nov 8
Upholstery tools ..... Oct 8
Water testing ..... Nov 9

**IRI**
New IRI Urethanes Group ... Aug 9
IRI Jubilee Year ..... Oct 11

**Licences, Agencies, Distributors**
Avon distributor in Eire ..... Oct 12
Barwell appoints Japanese agent ..... Oct 12
Bibby licence for foam systems ..... Oct 12
Bibby licence for South Africa ..... Sept 9
Brown & Forth appointed distributor for Du Pont ... Mar 8
Colikem appoints SPIA as agents ..... Aug 9
Compounding Ingredients to distribute Thixon ..... Nov 10
General Web Dynamics appoints Counterslip as agent July 10
ICI-NRPRA agreement ..... Mar 8
ISR/General Tire ..... June 9
ISR licences to ANIC and CoPo ..... Nov 10
Jacobson Van Den Berg agencies ..... Sept 9
Lhomargy/Jacobson van den Berg ..... Feb 8
Pertamina/Phillips licensing agreement ..... July 10
Phillips licence for Anic Spa Sept 9
Polysar appoints latex distributors ..... May 9

**Literature**
Adjustable bow curved roll, Mount Hope ..... Apr 8
Aerosols, Rocol ..... July 9
BP's Hull factory ..... Sept 8
Belting, Greengate & Irwell Nov 9
Booklet of couplings, Fluidrive ..... Jan 8
Breon 232, BP Plastics ..... Oct 10
Butakon materials, Revertex Sept 8
Chemical data sheets, Rhein Chemie ..... Nov 9
Copolymer Rubber & Chemical Corp. data ..... Apr 8
DP rubbers, Lorival ..... July 9
Deflashing publication ..... Dec 9
Fact sheets, Natural Rubber Producers' Research Assoc July 9
Hypalon liners, Du Pont..... Oct 10
Latices data book, BP Plastics ..... Dec 9
Latices, Revertex ..... July 9
Machinery catalogues International Corp ..... Dec 9
Moisture meters, etc. Shaw Moisture Meters ..... Sept 8
New data book, BP Plastics Oct 10
Nitrile rubbers, Copolymer Rubber & Chemical ..... July 9
Polybutenes, BP Chemicals . July 9
Pourable elastomers, Hardman ..... Aug 8
Process control instrumentation, Taylor ..... Sept 8
Process oils book, Burmah Castrol ..... May 9
Ramcon actuators, Charles Winn ..... Oct 10
Research & development, Balfour's ..... Oct 10
Sealants ..... Aug 8
Shell technical bulletin ..... Dec 9
Supplement to Business Efficiency—NEDO ..... Sept 8
Tetralons, Allied Colloid ... July 9
Ultrasonics, Dawe Instruments ..... Nov 8
Valves, Serck Audco ..... July 9
Ventilators, Lambert Bros. ... July 9
Vultac booklet, Vondelingenplaat ..... Sept 8
Wanson heaters ..... Oct 10
Weathering of plastics, RAPRA ..... Oct 10
Weighing equipment, Howe Richardson ..... Aug 8
Web guides, Mount Hope ... Nov 9

**Materials**
Adhesive polymers ..... Jan 8
Carbon blacks ..... Nov 9
Channel blacks ..... July 8
Curative ..... Apr 8
Fluoroelastomer ..... Dec 8
Herclor rubber ..... July 8
Hypalon curative ..... July 8
Keltan epdm ..... Oct 8
Lubricant ..... May 8
Plasticisers ..... May 8
Plasticisers ..... June 8
Plasticisers, British Sun Oil Aug 8
Plasticisers, Monsanto ..... Aug 8
Resins ..... June 8

Silicone rubbers ..... Sept 8
Solution sbr ..... Nov 9
Thermoplastics nr ..... Oct 8
Thickening agent ..... Oct 8
Tyre cord, British Enkalon . Apr 8
Tyre cord, ICI ..... Apr 8
Urethane ..... Apr 8

**Prices**
BP Plastics pvc prices up ... Apr 9
Bayer accelerators, etc, rise Mar 8
Chemical foams, price rise . Jan 9
Dunlop increases distributor prices ..... June 9

**Products**
Acrylic seam sealant ..... Jan 8
Adhesives ..... Aug 8
Adhesives ..... Sept 8
Belting ..... Sept 8
Carpet foam ..... Sept 8
Elastatruf, surfacing material July 8
Flooring ..... May 8
Latex foam ..... May 8
Long-life sealant ..... Jan 8
Monomer golf balls ..... July 8
Neoprene-based adhesives . May 8
Remould compounds ..... Sept 8
Roof-skin, polyurethane resin July 8
Rubber grease ..... July 8
Seating supports ..... Oct 8
Truck tyre ..... Oct 8

**Processes**
Spun steel fibre ..... Nov 9
Blacks from tyres ..... Nov 10

**Publications**
Dynamic testing, RAPRA ... Dec 9
Foam survey, GFM Chemical Market Research ..... Dec 9
Rubber in Transport Engineering, NRPRA ..... Dec 9

**Services**
RAPRA introduces two new services ..... July 12
Dunlop to install ICL computer ..... July 12

**Recommendations**
IM machines, extruders, EUROMAP ..... May 9

**Training Board**
RPPITB to carry on ..... Sept 9
RPPITB grant proposals approved by D of E ..... Oct 12


## Patent Specifications


Acrylic elastomers containing halogen ..... Feb 42
Aircraft tyre ..... Aug 20
Air spring ..... July 21
Anti-fouling and larvicidal rubber compositions ..... Apr 18
Anti-static carpet backing ... Sept 28
Bonding rubber to metal ... Jan 24
Bonding rubber to metals ... Nov 36
Bridge bearing ..... Aug 20
Coagulation of natural rubber latex ..... Aug 20
Coagulation of natural rubber latex ..... Dec 34
Co-polymers ..... Nov 36
Crosslinking agent ..... May 11
Curing rubber sheet ..... Sept 28
Deflation-proof car tyre ..... Oct 18
Elastomer-covered roller ... Aug 20
Expansible elastomeric adapter ..... Jan 24
Feed roller ..... May 11
Floor mat ..... Jan 24
Flowable rubber composition May 11
Fuel tank for vehicles ..... May 11
Graft polymers ..... Mar 27
Heat - resistant polychloroprene adhesive ..... Feb 42
Hose manufacture ..... Jan 24
Hose ..... June 16
Hose ..... Apr 18
Hose lining ..... July 21
Hydrogenated copolymers ... June 16
Hydroxy butadienes ..... Oct 18
Internal dusting of extruded tubing ..... Feb 42
Leather-rubber composition . Jan 24
Lining metal tubes with rubber ..... Dec 34
Lubricant for processing pvc Apr 18
Marine fender ..... Nov 36
Modified unsaturated polymers ..... Apr 18
Moulding rubber strip ..... Sept 28
Multiple extruding head ..... Feb 42
O-ring ..... July 21
Oil-extension of natural rubber ..... Sept 28
Pigment composition ..... Dec 34
Pneumatic tyre ..... June 16
Polyisoprene treatment ..... Nov 36
Polymers containing sulphur and phosphorus ..... Sept 28
Polyurethane belting ..... Nov 36
Portable weighing apparatus Dec 34
Pressure hose ..... Dec 34
Pressure-sensitive adhesive material ..... Sept 28
Processing aid ..... Oct 18
Rock-breaking device ..... May 11
Rubber-bound antioxidants . June 16
Rubber compression spring . Aug 20
Rubber mounting ..... Apr 18
Rubber printing plate ..... Mar 27
Rubber sieve ..... Mar 27
Rubber stabiliser ..... Feb 42
Sealant ..... Dec 34
Shaping rubber ..... Feb 42
Studded shoe sole ..... Mar 27
Tackifiers ..... Oct 18
Testing tyre noise ..... Oct 18
Textile cot ..... July 21
Textile rubbing apron ..... Aug 20
V-belt ..... June 16
Vibration-dampening rubber pads ..... Feb 42
Vulcanisation of belting ... Mar 27
Vulcanisation retarder ..... Sept 28


## Soviet Scene


Action of 'aggressive' media on vulcanisates ..... May 33
A study of the mixing process ..... Feb 16
Attempts to prolong the life of seals ..... Jan 18
Behaviour of TMTD in vulcanisation ..... May 32
Biological effects of Aerosil 175 ..... Nov 14
Bisphenols as rubber antioxidants ..... Mar 17
Blending dppd to obtain better solubility in rubbers Mar 17
Blends of polychloroprene and polybutadiene ..... Sept 10
Caprolactam, DPG replacement ..... Mar 16
Catalyst residues and oxidation ..... Dec 18
Comparisons of polyisoprene and nr ..... Apr 38
Complexes of 2-vinylpiridine as vulcanising agents with dcp ..... Sept 12
Contamination of carbon blacks during manufacture July 18
Copolymers of propylene oxide and allyl glicidyl ether ..... June 19
Crosslink's influence on abrasion wear ..... Oct 28
Effects of radiation on vulcanisates ..... July 17
Evaluating metal hydroxide curing agents for rubber . Aug 18
Fine particle size alumina fillers for vulcanisates ... Aug 17
Fire resistance of mineral filled neoprenes ..... Oct 28
Further data on sbrs containing built-in vulcanising systems ..... Sept 10
Improving production of sbr materials ..... July 16
Increasing abrasion resistance of rubber ..... Dec 16
Low temperature properties of pc films ..... Apr 38
Manufacture and properties of piperylene polymers ... Nov 13
Manufacture of cis-polyisoprene water dispersions . Aug 18
Manufacture of leather-like vulcanisates from sbr polymers ..... Oct 28
Metal oxides in vulcanisation of rubbers ..... Sept 12
More on USSR carbon black nomenclature ..... Mar 55
Oil extended emulsion polybutadiene ..... July 17
PPD derivatives in antidegradent studies ..... Aug 17
Pvc-nitrile blends with carbon blacks ..... Feb 16
Plastic properties of Soviet polybutadiene ..... Dec 18
Polymers containing methacrylamide ..... Nov 13
Polyurethanes with triazine ring structures ..... Feb 16
Predicting the effect of stress on a rubber vulcanisate Dec 16
Prevention of structuring in silica filled silicone rubber stocks ..... Oct 27
Property variations after repeated deformations ..... Jan 18
Protection against ozone cracking ..... Feb 15
Resin cures of epdm-butyl rubber blends ..... June 20
Secondary accelerators based on phthalimide derivatives Oct 27
Studies of dry pelletisation of HAF ..... Jan 18
Substitution of ppd materials July 18
Temperatures inside internal mixers ..... Feb 15
Thiourea derivatives used as compounding ingredients . June 20
Three new polymers—preparation and uses ..... Jan 19
Transport of abrasive slurries Nov 13
Triazinthiones as combination accelerators and antioxidants ..... Nov 14
Unsaturated acid salts in rubbers ..... May 32
Use of chlorinated polychloroprene as a bonding agent ..... May 33
Use of pf resins to reinforce nitrile latices ..... July 17
Use of polychloroprenes in cold-vulcanising cements . Apr 37
Use of stannous chloride to vulcanise natural rubber . Jan 19
Use of sulphur-containing resins as rubber curatives Aug 17
Vulcanisate porosity following cures at low pressures Mar 16
Vulcanisation of butadiene copolymers with waterglass June 19
Vulcanising polychloroprene and polybutadiene blends Apr 37


## Standards and Testing


Abbreviations of titles of periodicals ..... May 17
Amendments to standards ... Feb 38
BSI director general ..... Feb 38
BSI reaffirms decision on decimal point..... May 17
BSI sets target dates for approval ..... May 17
BS—Flexible PU foam ..... Dec 28
BS raw natural rubber ..... Dec 28
BS Rubber hoses and hose assemblies ..... Dec 28
Beyond standards ..... Feb 38
Draft standard coated fabrics ..... Dec 28
Environmental testing..... Dec 28
Estimation of carbon black Oct 16
German standards for plastics and rubbers ..... May 17
Glossary of terms used in the rubber industry ..... Jan 22
International tyre standards Oct 16
Learning about rubber ..... Nov 38
Measuring structure in carbon black ..... Aug 21
National Physical Laboratory Dec 28
New work started ..... Feb 38
Pores and powders..... Dec 28
Product performance testing May 17
RAPRA ..... Dec 28
Rubber and the engineer Oct 16
Simplified silicone testing ... July 33
Standard storage tanks ..... Oct 16
What does a test mean? ... Mar 33
Where the data go ..... Apr 14
Writing the date internationally ..... July 33


## Material Prices


Mar 69
June 79
Sept 89
Dec 65


## Trends and Forecasts


Apr 48
June 30
Aug 49
Oct 78
Dec 58


## Views and Reviews


Jan 53
Feb 45
Mar 65
Apr 23
May 26
June 23
July 38
Aug 22
Sept 17
Oct 20
Nov 25

# INDEX TO VOLUME 153 (Jan-Dec) 1971

## American Letter


Advanced tyre test facility Sept 14
After Corfam, what next in poromerics? June 16
Air cushion train for Washington May 18
Airmounts support million pound steam hammer July 15
A new twist to wire tyre belts Aug 13
Anti-pollution 'stream skimmer' Jan 20
A 'super tyre'—but when? Dec 19
Austerity evident at Miami ACS meeting July 16
Brazil to get two new tyre plants Sept 38
Canada to cut tariffs on tyres? May 16
Chevrolet owners warned over engine mounts Dec 20
Chrysler states opinions on radial tyres Jan 21
Controversy over studs for winter tyres Oct 19
Deutsche Bank buys Firestone's Phoenix interests May 20
DoT 'Consumer information regulation' for grading tyres Dec 20
Du Pont's Fibre F for tyre cords May 20
Du Pont to close Montague neoprene facility Nov 46
Electronic device for tyre pressures Sept 19
FTC takes hard line over Nephi unit Nov 46
Five-wheel Pipemobile June 14
Firestone's Airstroke pneumatic bellows Mar/Apr 20
Firestone Foam Products closes Fall River factory Sept 19
Firestone France's steel cord plant May 20
Firestone inflatable boats for shooting the rapids Sept 14
Firestone pushes on toward an all-time high Oct 20
Firestone scores at Indianapolis July 14
Firestone to appeal in UK Jan 21
Firestone to take pi licence from Goodyear? Feb 27
Firestone tyres for Ford Comet Oct 18
Fourth quarters results down Mar/Apr 22
Gates Rubber Co to lose plant in Utah Sept 38
Goodrich/Geon de Mexico Sept 38
Goodrich pulls out of poromers Dec 22
Goodrich sells Vibro insulator line Nov 46
Goodrich solves Ford's window washing problem Mar/Apr 22
Goodyear awaiting approval in Kuala Lumpur Mar/Apr 20
Goodyear to build in Casablanca Feb 27
Goodyear's 'Inflatobird' takes to the air Nov 41
Heat analysis for tyre testing Dec 19
Hold-off in proposed tyre law enactment Mar/Apr 20
Imports worry US tyre makers Oct 19
Israel exports tyres to US May 18
Latex shuttle wagon Mar/Apr 22
Le Tourneau gantry fitted with Goodrich tyres Feb 22
Licensee for Dow's foam tyre process May 20
Lower sales warning on tyres Feb 27
Management stiffens attitudes to employment conditions Aug 14
Marathon MT patents deal with CDC Nov 46
Marathon sells patent rights for MT carbon blacks replacement Sept 19
McCreary to market CEAT tyres Jan 21
McNeil offers new deal in retread presses Nov 42
Melvin Mooney for Hall of Fame Aug 14
Michelin cord plant to open this year Feb 27
Michelin maritime plant May 18
Michelin steel tyre cord plant goes to France Nov 42
Michelin threatened with tax on tyres from Nova Scotia Dec 22
Michelin's Canadian plant hits snags July 15
Minimum treads now mandatory in 27 states Oct 20
Mooney installed in Hall of Fame Dec 20
More epdm for US as Goodrich plant starts Sept 16
More work for the DOT Jan 21
NR stockpile sales resume at 6,000t/month Sept 19
New steel tyre construction July 15
No tyre plant for Puerto Rico Oct 18
One million mile tests for cast cordless tyres July 58
Orbitread for new tyre makers as well June 18
PVC capacities continue to grow June 18
Phoenix and Firestone part Feb 27
Polyisoprene plant for three company group in Japan June 65
Polyurethane treads may make mark in off-the-road tyres Aug 14
Predictions for 1971 Feb 22
Prospects for current year looking up July 15
Radials for 72 'insignificant' Nov 41
Radials in one stage Mar/Apr 19
Radiation Dynamics to buy UK company Sept 38
Rayon's tyre failure film is refuted June 16
Retreaders' standards June 14
Retread safety standards Oct 20
Retread's popularity still growing June 16
Rubber health studies start Aug 27
Sales & Earnings for 1970 June 18
Sales and earnings down for US firms May 18
Shell Chemical to close down Torrance sbr plant Dec 20
Solid golf ball closes centre plant Nov 46
Southern plant for Firestone's lorry radials Oct 20
Timetable for tyre grading system Sept 19
Thermoplastic plant to be built in Wesseling May 18
Trade Act fails to get through Senate Feb 24
Two new tyre plants scheduled for Brazil Nov 42
Tyre companies' earnings improve Dec 22
Tyre companies' trade improves Sept 15
Tyre cord in the US—Its Glass until 1975 Feb 26
Tyre makers worried over imports Jan 20
Tyre quality grading system June 16
UK firm loses fight over Nulite trademark Mar/Apr 22
US companies announce overseas expansions Oct 13
Union hits at new Firestone plant Nov 42
Uniroyal unveils pollution controllers Mar/Apr 20
When is a tyre carcass a raw material? Aug 13
Workers vote wage cuts to keep plant open Nov 42


## Articles


BRMA annual dinner May 53
CDRA symposium on Technological Forecasting Sept 41
Carbon Black—carbon particle/reinforcement of rubber Part I Feb 44
Carbon Black Part II Mar/Apr 25
Continuous curing Oct 38
Computers & Compounders, reviews of two symposia Sept 44
Costs Efficiency and Profits —report on the IRI London Section Dec 47
Deflashing package offered by BOC Oct 53
Degradation of rubber, and antioxidant action—a possible role for singlet oxygen, The Sept 36
Du Pont 2—Continuing RJ's series on speciality elastomers Sept 27
Engineering data and dynamic test machines for rubber Nov 54
Firestone introduces 'pick your own design' retreads Oct 84
Fully automatic dumb-bell sample tensile tester revealed by DSM Nov 16
Future technology at Leamington Part I June 25
Future technology at Leamington Part II July 50
Hall of Fame Elections Jan 42
How much Ozone Sept 64
IRI celebrates 50 years in style July 18
Irradiation trials on sbr compounds May 36
Man made leathers at Intersat July 30
1971 International Rubber Conference report Dec 37
National College Convocation Jan 48
Neoprene — that's duprene forty years on May 41
Polybutenes in adhesives formulation Aug 31
Polymers in colour: a review of rubber pigmentation Nov 19
Power transmission at Loughborough May 28
Properties of rubber blends and blends of rubber and plastics Nov 35
Quiet black revolution, The Oct 70
Relationships between polyurethane elastomer structure and ageing behaviour Part I June 49
Relationships between polyurethane elastomer structure and ageing behaviour Part II July 44
Relationships between polyurethane elastomer structure and ageing behaviour Part III Aug 45
Rubber process oil development at Burmah-Castrol Aug 18
Rubbercon 72—IRI calls for papers Mar/Apr 81
Rubberex 72 to run concurrently with Rubbercon 72 Mar/Apr 46
Science, sociology and change in the plantation industry Sept 68
Starch in Rubber Oct 28
12th Annual meeting of the International Institute of Synthetic Rubber Producers 25
The tyre market now Nov 49
Trace reader speeds Dunlop's test programme Oct 59
Trade Balance Oct 51
Urethane polymers in West Europe Jan 31
Urethanes in Textiles, one day symposium Aug 41
Vulcanisation studies of natural rubber cured with Quinone dioxime dibenzoate Dec 49
Why Ashland went to Speyer July 40
Woodville Rubber Feb 16


## Authors


Allen, Gordon D. Jan 31
Barron, R. M. July 30
Blanchard, A. F. Feb 44/Mar/Apr 25
Bonell, P. Sept 64
Brokenbow, B. E. June 48
Aug 45
Brown, R. P. Sept 64
Buchanan, R. A. Oct 28
Canva, G. P. and J. J. Sept 36
Dawson, D. Dec 49
Fryer, Charles W. Jan 31
Hall, M. M. Nov 54
Katz, H. C. Oct 28
Morrell, Dr. S. H. Sept 44
Ong, K. L. Dec 49
Rist, C. E. Oct 28
Russell, C. A. Oct 28
Simpson, A. J. Aug 31
Sims, D. June 48
Aug 45
Smith, Dr. D. A. Nov 19
Worthington, A. B. Nov 54
Wright, J. June 48
Aug 45


## News Briefs


**Company News**
Aberdare/Pirelli General Cable Works Sept 9
Albright & Wilson moves to Knightsbridge Nov 10
American General Electric in Europe May 14
Anchor agreement with Paragon of SA July 9
Anchor publicity department in Manchester Aug 9
Anchor to market Schorchguard '0' May 12
Ashland moves to Columbus, Ohio Sept 9
Avon Rubber open new division Dec 9
BP Chemicals, its engineering department May 12
BP Chemicals new department June 9
BRMA bonding section June 9
BRMA president reports Aug 8
BTR Leyland/Hopkins Odlum June 9
BTR Leyland/Conrad Scholtz July 9
BTR Leyland product division June 9
BTR/Leyland reorganises hose operations May 12
Bayer and Rhone-Poulenc link to form MDI unit May 10
British Titan Products reorganises Jan 9
Cabot Carbon moves to Stanlow Mar/Apr 14
Cabot Corporation in Rotterdam Mar/Apr 14
Caligen Foam opens plant in Belgium Dec 9
Carbon black plant in India Sept 8
Cema (UK) Ltd, new control gear firm Oct 10
Ciba-Geigy moves northern area office May 12
Columbian to suspend production of some materials Feb 11
Compoflex expands Delph plants Oct 10
Dow Unquinesa new latex plant Oct 10
Drake UK foam plant on stream Sept 8
Dunlop Angus hose group Feb 10
Dunlop Angus moves Jan 9
Dunlop Angus, Rubber Plastics Division Feb 10
Dunlop engineering group reorganise Nov 10
Du Pont Aldyl A plant May 15
Du Pont enter thermoplastic rubber stakes Nov 10
Du Pont £7m expansion Aug 9
Durham acquires Wormersley Nov 9
Durham Chemical Group expands Nov 10
Far East office for NRB technical services May 36
Fife Corp. opens UK subsidiary Oct 10
Firestone acquires Aeon Dec 9
Firestone to fight water pollution May 15
Flexible Ductings form German company May 12
Four more companies join International Institute of Synthetic Rubber Producers Feb 11
Gardner/Wentworth tie-up May 14
Goodyear £1m technical centre June 9
Greengate & Irwell/Rubber House Nov 10
Greengate Industrial Polymers Ltd June 9
Guthrie Estates new offices May 12
Hardman & Holden new plant Feb 11
Harlow Chemical reorganised Dec 9
Harrison & Jones and Ranwal Feb 10
Hecht Heyworth & Alcan/Colikem Feb 10
ISR acquires VP latex Nov 9

ISR and Solent sue Badger ... July 9
ISR expanding at Hythe and Grangemouth ... Feb 10
International Corporation moves to Craven Park ... Nov 10
Jacobson Van Den Berg move ... June 9
Jacobson Van Den Berg northern office ... Nov 10
Lindustries to reorganise ... Dec 9
Low/Berstorff tie-up ... Nov 10
Metering Pumps/F.A. Hughes & Co ... Mar/Apr 14
Michelin to manufacture steel-braced radials ... May 12
Michelin to organise car test day ... Mar/Apr 14
Miles Redfern join BTRL Group ... Sept 9
Monsanto rubber chemicals plant in Antwerp ... Sept 8
NRPRA/Hughson Chemical Co ... Sept 8
National Adhesives/Associated Adhesives ... May 15
New name in grg field ... Aug 8
New Polysar latex plant ... May 10
New president for Tyre Manufacturers' Conference Ltd ... Aug 9
New Talc company formed ... May 15
Overall rubber picture ... Mar/Apr 8
Philblack sales move to Bristol ... Sept 9
Pirelli footwear expansions ... Feb 10
Pirelli sales amalgamation ... Nov 9
Pirelli to supply Vauxhall ... Mar/Apr 14
Polysar Plastics expands ... May 15
Polysar service centre ... Nov 10
Pure Chemicals now Interstab Ltd ... July 9
RPPITB to aid apprentice recruitment ... Oct 91
Rationalisation of BTR Leyland ... Nov 9
Revertex/LCA tie-up ... Feb 10
Revertex opens new HQ ... Mar/Apr 10
Revertex/Polimul ... Nov 9
Romchim concludes contract with Inventa ... Dec 9
Rubber Neddy shut—tyres for motor industry NEDC ... May 36
Shell/Polyfleet ... Feb 10
Shell/Vinatex marketing agreement ... Jan 9
Slater Walker form new coated fabrics company ... Feb 10
Strikes knock Dunlop profits ... May 14
TPA plant planned by Bayer ... Feb 11
Taylor Instruments acquires Servomex ... Dec 9
Tyre Technicians — consultancy ... June 9
UK silicone shake-up ... Mar/Apr 16
Uniroyal sales move to Bromsgrove ... Aug 9
Vitalam ... Aug 9


**Conferences, Meetings, Exhibitions, Courses**


Costs and profit, The Institution of the Rubber Industry ... May 12
DKG Wiesbaden meeting ... July 12
Foundation lecture ... June 9
IRI Merseyside — 'new developments' symposium ... July 9
Institute of Polymer Technology to run rubber technology course ... Aug 9
RAPRA in Sweden ... May 12
Urethanes and textiles, Institution of the Rubber Industry ... May 12
Urethanes-in-footwear symposium by IRI Urethanes Group ... Sept 9


**Equipment**


Chromotograph ... Dec 8
Cleaner ... Sept 8
Compression tester ... Aug 8
De-flasher ... July 8
Dynamic cycler ... May 9
Extrudate printer ... Nov 8
Flash remover ... Mar/Apr 14
Foam tester ... Feb 8
Formulae memory ... May 8
Humilog, vapour control instrument ... Mar/Apr 14
Injection moulders ... Aug 8
Injection moulders ... Sept 8
Intermix Mk 3 ... Nov 9
Jointing presses ... July 8
Metric Rotocure ... Jan 8
Micro measurer ... June 8
Mixer/dispenser ... Aug 9
Mobile benches ... May 8
Mooney calibration ... Mar/Apr 14
Motors ... Oct 6
New extruders ... May 9
Parts trimmer ... Nov 8
Pressurised fluid bed ... Nov 8
Rheogoniometer ... Aug 8
Roll cutter ... July 8
Rubber chopper ... May 9
Sealant extruder ... Oct 6
Seal checker ... Feb 8
Solution feeder ... June 8
Static eliminator ... Feb 10
Swell tester ... May 8
Temperature controller ... Oct 6
Test machine ... July 8
Volumeter ... Nov 9
Wire strander ... Aug 8


**Licences/Agencies**


Bayer to make rubbers for Revertex ... July 9
Colikem now ANIC agents ... Aug 9
Hardman Inc/Charles Ross ... Sept 8
Hermann-Moritz / Jacobson Van den Berg ... Sept 8
Stanton is UK agent for Rotax ... Nov 9
Sunstrand/Hi-Flex International ... Sept 8


**Literature**


ACTU controls, Actuated Controls ... Feb 8
Accelerators for epdm, Rhein Chemie ... Aug 9
Additives, Anchor ... Aug 9
Belt splicing, BRMA ... Jan 8
Blacks, Phillips Petroleum ... Aug 9
Brochure on guillotines, Fogg & Young ... Dec 9
Carbon blacks, Philblack ... Feb 8
Chromatography, Shandon Southern ... Aug 9
Coatings, Loyne ... July 8
Curing agent, Hardman ... Oct 10
Extruder ancillaries, Boston Machinery ... Dec 9
Fluidics, Norgren Fluidics ... May 10
Fluid seals, BRMA ... Mar/Apr 10
Foams, Dunlopillo ... Aug 9
Furniture Industry Research Association services ... Oct 10
Hose guide, Uniroyal ... Dec 9
Hydraulic press safety, BPF ... Feb 8
Institute of Polymer Technology issues its first Journal ... Oct 10
Latex foam adhesive, Goodyear ... May 9
Latex storage, Dow Chemical ... June 9
Metrication guide, Dunlop ... Nov 9
Moulds and Dies, Battelle Institute ... Feb 8
Off-road tyres—Vacu-Lug ... Jan 8
Packings, George Angus ... Nov 9
Plasticisers, BP Chemicals ... June 8
Plasticisers, Monsanto ... Jan 8
Polymer data BP Chemicals ... May 10
Polysulphides, Thiokol ... Feb 8
Polysulphides service report, Thiokol ... Dec 9
Presses and mills, Selson Machine Tool ... Dec 9
RAPRA Trade names publication ... Aug 9
RPPITB introduces training publications ... Nov 9
Roll guides, Mount Hope ... Aug 9
Rotary joints, Yates-Barco ... June 9
Safety devices, Leeds & Bradford Boiler Co ... May 10
Select-O-Weigh, Howe Richardson ... Feb 8
Siemens equipment ... Feb 8
Silenes, PPG Industries ... May 10
Solprene and blacks bulletins ... May 9
Speciality blacks, Ashland Chemical ... Aug 9
Storage tanks, Uniroyal ... May 10
Switches, Actuated Controls ... Nov 9
TRs Shell ... July 8
Technical bulletin, Thiokol ... Mar/Apr 10
Technical report from Philblack ... Oct 10
Technical report on blacks, Philblack ... Dec 9
Training case histories, RPPITB ... May 9
Transport in pipes, British Hydromechanics Research assoc. ... May 9
Tyre fibres, ICI fibres ... May 9
Web guides, Mount Hope Machinery ... Feb 8
Web guides, Mount Hope ... June 8
Whiting manual, Cement Marketing Co ... May 9
Winnofil in pvc, ICI Mond ... Feb 8


**Materials**


Aerosols ... Nov 8
Bromobutyl ... Dec 8
Butyl crumb ... Oct 6
Clear silicone rubbers ... May 8
Coal-fine blacks ... Dec 8
Dispersions ... Oct 6
Dispersions ... Nov 8
Gas feedstock for blacks ... Mar/Apr 16
Magox paste ... Nov 8
New range of CPE resins ... Nov 8
Nordel epdm ... May 8
Neoprene accelerator ... May 8
Pelletised chemicals ... July 8
Pigments ... June 8
Profoamers ... Feb 10
Rapidblends, rubber compounding ingredients ... June 8
Rubber reinforcing resins ... Mar/Apr 14
Slate powder ... June 8
Surfactants ... June 8
Tackifier ... May 8
Tackifier ... June 8
Thermoplastic rubbers ... Oct 6
Urethane elastomers ... Dec 8
Urethane resins ... May 8


**Orders, Deals, Exports, Contracts**


Angus sales agreement ... Nov 9
Avon secure contracts worth £250,000 ... May 10
BRS to use Pirelli's giant radials ... Oct 10
BTR enter Finnish belting market ... May 10
BTR/Leyland order from Russia ... Mar/Apr 16
Brazil company give contract to Dunlop ... Aug 9
Conoco-BP sign contracts with Norsk Hydro ... June 9
Dunlop belting exports rise ... Sept 9
Dunlop conveyor belting for Chile ... Oct 10
Dunlop floating hose contract ... Sept 9
Dunlop Semtex flooring exports ... Sept 9
Export by Dowty tops £650,000 ... July 8
Francis Shaw orders reach £1.3m ... July 9
Francis Shaw sells vulcanising presses ... Jan 9
Francis Shaw awarded Polish contract ... Feb 11
Francis Shaw exports worth £550,000 to Rumania ... Sept 9
GEC award £330,000 contract to Pirelli Enfield ... Aug 9
Goodyear buy Francis Shaw machinery ... May 10
Mattresses from Dunlopillo ... May 10
Metalastik to be produced in South America ... Oct 10
Pirelli agreement with BR ... May 14
Pirelli awarded £1½m export order ... July 8
Pirelli Enfield Supertension Cables awarded CEGB contract ... Oct 10
Pirelli Ltd's flooring for airport ... Sept 9
Pirelli studded rubber flooring for Cardiff ... Oct 10
Pool hose for Australia ... May 10
Runnymede rubber flooring in stock exchange ... Dec 8
Vickers receive order worth £112,000 ... May 15


**Prices**


Dow increase glycols price ... Sept 8
PU foam rises ... Jan 9
Price increases in polyethers ... Dec 8
TDI rise, ICI ... Jan 9
Tioxide pigments price rise ... July 9


**Products**


Adhesive ... Sept 8
Adhesives ... June 8
Air hose ... July 8
Aluminium wiring ... Jan 8
Anti-fire cable covering ... Nov 8
Carpet backing for tufted carpets ... Oct 6
Compounds ... Sept 8
Connectors ... Sept 8
Cut edge belt ... Jan 8
Cyanoacrylate adhesive ... Dec 8
Dowty's printed gaskets ... Oct 13
Fire retardant seats ... Dec 8
Flame retardant carpet backing ... Oct 6
Flame retardant foams ... Nov 8
Foam carpet underlay ... Oct 6
Giant fenders ... Nov 8
Heat seal elastic ... Jan 8
Impregnation ... Sept 8
Laminated conductor ... July 8
Mastic tape ... May 8
Metric lagging ... Nov 8
Multi-purpose hose ... Oct 6
PU adhesive from Bostik ... Dec 8
Wound tyre ... Jan 8


**Promotions**


BRMA to run 'Tyre Safety Week' ... Mar/Apr 14
BRMA underlay scheme ... Mar/Apr 16


**Research**


Rubber additives, Information Research ... Feb 11


## News in Camera


Anker's show models moved to Stroud plant ... Mar/Apr 59
Ashland Chemical plant on schedule ... Feb 42
Avon S650 Sportboat used as ferry ... June 22
Awards for innovation, saving and lecturing ... Nov 38
BTL Mould & Die haul-off and guillotine machines ... Oct 87
BTR boots tested ... Feb 42
BTR Leyland belt in use for 18 years ... Oct 86
BTR's Silverweave conveyor belt in use after two-years ... June 23
Bayer's Baypren used on Olympic stadium ... Nov 39
Daniels Hamilton acquires UK agency for Ultra Rotor machines ... Dec 34
Daniels Hamilton moves into rubber injection ... Jan 14
Denis Leader to sell Guix mixes in UK ... Feb 43
Dunlop manufacture new printers blanket ... May 23
Dunlop Selflote hose used to pump sand slurry ... June 22
Dunlopreme foam 'lounging area' ... May 23
Du Pont neoprene used on Opel cars ... Oct 87
Du Pont products unloaded at Acton Grange Distribution Centre ... Mar/Apr 59
Fogg & Young guillotines sold to Russia ... Mar/Apr 58
Goodyear to build airship in UK ... Nov 38
Goodyear tyre toasted in champagne ... Oct 87
Goodyear tyres used for torpedoes ... Feb 42
Guthrie opens research unit at High Wycombe ... Dec 34
HiFlex International opens plant at Salisbury ... Jan 15
ISR new abs and speciality latices plant opened ... June 22
Lintafoam installs carpet tile plant ... May 22
London IRI visits Barwell plant ... Nov 39
Milling behaviour of Magox OP dispersed magnesium oxide ... Dec 35
Miniature rubber seals produced by Dunlop Precision Rubbers division ... Mar/Apr 59
New truck tyre remoulding plant for Avon ... May 22
Northern Rubber Co's new back-coating plant ... June 23
Phillips instal 10-station press banks ... Mar/Apr 58
Pirelli wins 'dream of an order' ... May 22
Redman Heenan Froud electrostatic precipitator ... Jan 14
Schubert presses in BTR's quality product shop ... Nov 39
Steelcord calender Avon's latest ... Jan 15
Two new applications for Du Pont's speciality elastomers ... May 23
Two new machines from Dusseldorf show ... Oct 86
Vredestein fenders for Singapore ... Feb 43

## Patent Specifications


Adhering polyester textiles to rubber ..... July 38
Aircraft tyre ..... May 49
Antiozonant ..... Mar/Apr 43
Anti-vibration mounting ..... Aug 54
Carbon black manufacture... Feb 30
Carburettor diaphragm ..... June 20
Chemically bound antioxidants ..... May 49
Continuous vulcanising apparatus ..... May 49
Double-channel guide for a car sliding window ..... June 20
Elastomer-covered roller ... June 20
Extruder die ..... Feb 30
Glass fibre reinforced hose July 38
Hose reinforcement ..... Aug 54
Latex foam rubber production ..... Jan 16
Lubricant for rubber extrusions ..... May 49
Machine for cutting extruded rubber ..... Aug 54
Manufacture of vulcanised rubber sheeting ..... Mar/Apr 43
Measuring hardness of rubber ..... July 38
Oil-extension of natural rubber ..... Jan 16
PVC gloves ..... Oct 92
Pallet ..... Jan 16
Pipeline cleaning ball ..... July 38
Pneumatic jack ..... Oct 92
Pneumatic tyres ..... Feb 30
Polybutadiene composition... Oct 92
Polyisoprene latex compositions ..... Aug 54
Reducing oil-contamination of beaches ..... July 38
Reinforcing agents ..... Jan 16
Reinforcement of rubber ... July 38
Resilient bushing ..... June 20
Rolls for use in printing Mar/Apr 43
Rubber additive ..... May 49
Rubber mould ..... Mar/Apr 43
Sealant ..... June 20
Sealing windows of motor vehicles ..... Oct 92
Shock absorber ..... Mar/Apr 43
Spreadable foamed latex ... May 49
Spreadable rubber latex foam ..... Oct 92
Vulcanising agent ..... Feb 30


## Scene from Japan


More synthetic rubber plants —and a new synthetic rubber ..... Dec 16
Up go sr export prices ... Nov 14


## The Soviet Scene


Acid resistance of rubbers with a selection of fillers Mar/Apr 52
Alkoxysilanes as anti-structuring agents ..... Feb 12
Alkylphenolformaldehyde curatives ..... Nov 32
Alkylsulphonates replace esters as plasticisers ..... Feb 14
Antistatic agents ..... Nov 32
Batch or continuous methods for nitriles? ..... May 33
Bis-benzthiazyl sulphenamides ..... June 12
Bis-maleimides — curatives June 11
Blends of natural rubber with ep co- and ter- polymers ..... Sept 10
Bonding rubbers to plastics during cure ..... Sept 11
Changing processing behaviour of cis-polybutadiene rubbers ..... Aug 25
Cold flow of different types of pbd..... Mar/Apr 56
Compatibility of oil extended epdm with other polymers Aug 25
Conductive rubbers to measure applied pressures ... June 12
Conductive silicone rubbers Mar/Apr 56
Cracking in fishermen's boots Feb 14
Crystallisation of polyisoprene vulcanisates ..... Sept 11
Effects of curing systems on epdm rubbers ..... Jan 10
Hexachlorethane / thiourea complex for vulcanising... July 28
Hydrolysis of urethane rubbers ..... May 33
Incorporating reclaim in synthetics ..... May 33
Modified dimethylsiloxane rubbers ..... June 11
Morpholine disulphide as a vulcanising agent for nr Feb 14
Morpholine disulphide curing Jan 12
Nitrozan K possible green strength improver for pi Mar/Apr 49
P-quinonedioxime vulcanising agents in sbr and nbr Nov 32
Peroxide curing of epr ..... Dec 12
Polymer behaviour in contact with concentrated acids ..... June 12
Prevention of structuring in silicones ..... Jan 10
Properties and utility of nitrile polybutadiene blends July 28
Properties of oil extended polymers ..... Feb 12
Resistance of butyl rubbers to acetic acid ..... Sept 11
Review of ageing aspects and related matters..... July 26
Sorbic acid salt curatives ... Nov 32
Structure changes in polychloropene ..... Jan 12
Studies of a new, rubber soluble, antioxidant ..... Dec 14
Terpolymers of THF, ECMO and AGE ..... July 23
The effect of vulcanising system on resistance to radiation ..... Aug 27
The influence of compound preparation on the cohesive strengths of rubbers Jan 10
Using 4-vinylcyclohexene-1 as termonomer in epdm elastomers ..... Mar/Apr 49
Vulcanisation of black-loaded propylene oxide rubbers... Dec 12
Why does nitrile rubber stiffen during internal mixing? ..... May 32
Work of Russia's rubber research establishments ... Oct 22
Xanthate hydrogen as a low toxicity accelerator ..... May 32


## Standards and Testing


Amendments to British Standards ..... Feb 38
America tests tyres ..... June 62
BS standard, Flexible polyurethane foam sheeting for use in laminates ..... May 38
Bedding and upholstery ... Jan 18
'Black rubber' and PU foam strips tested for fire resistance ..... Jan 18
British Standard for synthetic rubber latex ..... May 38
British standards, Endless V-belt drives ..... May 60
Draft British Standards circulated for comment ..... Feb 38
Fire hazards from foam—a breakthrough for safety ... May 38
New BSI work started ..... Feb 38
New British standard, safety footwear ..... Jan 18
Rapra technical review No. 54 ..... Feb 38
Raw natural rubber specification ..... June 62
Recommendations for bonding rubber ..... Feb 38
Revised BS, Coated fabrics for protective clothing ... Feb 38
Revised BS, Methods of testing synthetic rubber latices Jan 18
Revised British Standards... June 62
17th Annual standards Conference ..... Feb 38
Standard units approval ... Feb 38
The technical control function ..... Mar/Apr 40


## Materials Prices


Dec 56


## Trends and Forecasts


Jan 46
Mar/Apr 62
May 53
Aug 16
Nov 30
Dec 24


## Views and Reviews


Jan 27
Feb 32
Mar/Apr 72
May 54
June 42
July 22
Aug 38
Sept 56
Oct 65
Nov 58
Dec 26

# INDEX TO VOLUME 154 (Jan-Dec) 1972

## American Letter


Air adjustable shock absorbers ... June 24
Air bag fight continues ... June 24
Air bag passive restraint systems ... Apr 19
Akron cuts production costs Sept 24
Ban on unsafe tyres ... Jan 32
Biltrite starts moves to buy Globe ... Oct 47
Boston ACS meeting success June 27
CAL report on studded tyres Mar 19
CDC keeps promise on proposed growth of Polymer corp ... Nov 49
Canadian Development Corp. announces expansion plants for Polymer ... Oct 47
Changes at Uniroyal ... Aug 34
Channel blacks from Indonesia ... Mar 16
Clampdown on reclassified passenger tyres ... Nov 48
Death of G. Stafford Whitby
Death of leading rubber scientist ... Apr 19
Delta to import Continental tyres ... Jan 32
Department of Justice wins out in Goodrich footwear battle ... Oct 45
Detroit goes for more radials May 28
Development work continues on air bags ... May 33
Department of Transportation rethinks over tyre grading systems ... Aug 31
Du Pont's Fibre B tyre cord Feb 23
DuPont Fibre B to be named Aromid ... Sept 30
Du Pont and HPM combine on auto fender design ... Feb 31
Earnings of US tyre manufacturers up ... May 28
Expansions planned by US rubber companies ... Dec 30
15-ton trailer to test tyres ... June 22
FTC hits out at tyre ads ... Aug 30
Firestone Adhesives Co. formed ... May 33
Firestone's bias made radials Aug 31
Firestone expands ... Oct 47
Firestone follows Goodrich out of reclaim ... Mar 19
Firestone and General Tire fight drawing to close? ... Apr 19
Firestone grant helps establish Stafford-Whitby lectureship ... Aug 34
Firestone loses to General—then appeals ... Aug 29
Firestone operates own fleet of ships ... June 24
Firestone to discontinue its European auto racing activities ... Nov 49
Five tyre companies to defend anti-trust suit ... June 27
Foam backed carpeting boom Aug 36
Ford develops 'reclaim process' for urethanes ... Aug 36
Free—radial customer tests Oct 45
Further expansions by Goodyear and General Tire ... May 31
Garlock acquires French firms ... May 33
General Motors to pay for modifications ... Jan 33
General Tire install computer controlled laser beam device ... May 33
General Tire and Mabor expand ... May 31
Goodrich Akron workers accept changes ... June 27
Goodrich adopt new marketing approach ... Oct 45
B. F. Goodrich advertising campaign ... Feb 25
Goodrich develop Romor rubber seal ... May 26
Goodrich's dredging innovation ... Dec 28
Goodrich management reshuffle ... Aug 30
Goodrich, B. F. has expanded its Philippines tyre plant May 31
Goodrich rubber cushions tracked vehicle ... Aug 29
Goodrich settles government claim on Space Saver Aug 34
Goodrich strengthens pvc position ... Aug 36
Goodrich to supply tyres for B-1 strategic bombers ... June 27
Goodrich sells Motor Freight May 28
Goodrich to sell footwear concern ... May 31
Goodyear enters joint venture with Pernas ... Nov 49
Goodyear's first ex-US plane tyre test centre ... Oct 47
Goodyear four mile long conveyor belt ... Dec 28
Goodyear laser ... Jan 31
Goodyear's old home demolished ... June 22
Goodyear plans tyre plant expansion ... Oct 44
100 ton tanker tests tyres ... Dec 30
High interest in ACS meeting ... Dec 30
Impact absorbing bumpers... Sept 22
Increase in tyre demand ... Sept 24
Injection moulded urethane soles ... Jan 33
Judgement in General Tire case in summer ... May 26
Kleber and Pirelli increasing efforts in US tyre market Aug 31
Michelin counters US duty threats ... Sept 26
Michelin Tire running on three-shift basis ... Mar 19
Michelin tyres of Canada to expand ... June 27
Mining innovation based on flexible conveyor belt ... Oct 44
More SMR for US tyre companies ... Mar 16
More setbacks for air bag . Aug 34
New lease of life for Firestone's LXX tyre? ... Dec 28
Natural rubber to be replaced in engine mounts? Sept 22
Over 370.8m tyres on roads in US ... Oct 47
Polysar and Nippon postpone joint venture for 18 months May 33
Pontiac to use 'flexible front end' ... Nov 46
Polymer Corp to go public? Sept 30
Possible tie-up of Schenuit with Armstrong Rubber ... May 33
Problem of non-certified tyres Oct 47
Production line x-ray inspection nearer reality ... Dec 30
Prospects for year look good in US ... June 22
Quality grading date passes Sept 24
Records predicted for 1972 . Feb 25
Retread standards not yet in operation ... Oct 47
Retreaders file suit over tyre standard ... Feb 23
Retribution on Michelin? ... Aug 31
Revenue Act of 1971 ... Mar 19
Rubber oil storage bag for tankers ... May 31
Rubber railroad crossings ... Jan 33
Sales arrangement for Fulda radial tyres ... June 27
Sales of winter tyres expected to be a record ... Nov 49
Schenuit/Armstrong takeover off ... Aug 36
Schenuit sells tyre business to McCreary ... Oct 45
Speculation on composition of Du Pont's Fibre B ... May 28
Stafford Whitby Hall of Fame nominee ... Nov 48
Steel belts for new US made tyres ... Mar 13
Surprise over way in which tyre grading system is revealed ... Nov 48
200 ton dump truck—11.5ft high tyres ... Mar 14
Television optics improve laser tyre inspection ... Sept 26
Third quarter results break records ... Dec 32
Tube butt splicer ... Jan 32
Tyre grading system turned down ... Jan 31
Tyre laser tester ... Jan 32
Tyre-makers report on Fibre B ... Oct 43
Tyre price rises ... Aug 34
Tyre recalls exceed last year's total ... Aug 30
URW seeks to balance imports ... Jan 33
US auto industry uses 80,000 tons of PU ... Sept 30
US concern over tyre imports ... Oct 45
US financial reports improve Mar 16
Uniroyal builds hose plant in Red Oak, Iowa ... May 33
United Rubber Workers president hits out at US tyre companies ... Nov 49
What will happen to glass cord tyres? ... Oct 43
Workers accept Firestone changes ... May 33
World's longest conveyor belt proposed ... June 24


## Articles


Adding tack to epdm—The use of Hyvis polybutenes Apr 25
A new safety wheel design developed by Avon Rubber Oct 48
Anticipated changes in marketing methods dictated by current trends in rubber industry practice ... Feb 18
Barwell's revolutionary retread ... Oct 37
Continex plant starts up—ISR to take bulk of its production for masterbatching ... Feb 30
Costs, Efficiency and Profits Conference Report ... Jan 15
Durie & Miller's Monocel backer swings into gear... Aug 10
Fatigue Testing of Rubber... Dec 41
Future rubber processing ... Nov 20
The Great European tyre merger: fact or fantasy and if so, whose? ... Dec 40
Hertz-Four introduces uhf cable curing line ... Nov 18
International Institute of Synthetic Rubber Producers 13th annual conference ... Aug 35
International Rubber Conference 1971, Part II ... Jan 11
International Rubber Conference Papers ... Jan 28
International standardisation at Cologne ... Dec 22
Investigation of polymers by N.M.R. spectroscopy ... Oct 30
Latex bitumen blends for the insulation of buildings June 60
The Latex Market ... July 24
Liquid rubber ... Sept 33
Machinery at the show—Rubberex revisited ... July 29
The Magnacurem microwave curing plant ... May 55
New line for spiral wound pressure hose ... July 38
Powder and liquid rubbers—a status report from the ACS meeting in Cleveland Dec 19
Pressurised fluid bed—A report on hose curing trials at RAPRA ... Jan 44
Processing and extender oils for general purpose rubbers ... May 35
Rubberex 72 and Rubbercon 72 Preview ... Jan 17
Rubbercon 72 Report concluded ... Aug 38
Rubberex 72 Preview ... May 64
Rubberex 72 Review and report ... June 50
The Rubberex 72 inflatables competition—Prizewinners June 43
Single source buying ... Mar 54
The rise and rise of ISR ... Feb 39
The top 100 contributors to the rubber literature 1932-1970 ... Mar 11
Total mobility tyres—Dunlop's winner ... Apr 46
Tyres, teomers and computers. Rubbercon 72 report—part 1 ... July 32
UK rubber and the EEC ... Mar 34
UK Trade balance ... Oct 51
Uniroyal pulls out of crossplies in Europe—and turns to steel radials ... Jan 9
VAT Conference report ... Aug 26


## Authors


Clapson, B. E. ... Dec 41
Dove, R. A. ... Dec 41
Hamilton, G. G. ... Apr 25
Hoffman, W. ... June 60
Izod, D. A. W. ... May 55
Katritizky, Prof. A. R. ... Oct 31
Lujik, Dr. P. ... May 35
McGavack, John ... Mar 11
Marshall, Stuart ... Jan 8
Meredith, R. J. ... May 55
Morrell, S. H., Dr. ... Dec 19
Murphy, John ... Jan 15
Simpson, A. J. ... Apr 25
Smith, Dr. A. ... Oct 30
Ward, Dr. B. ... May 35
Warners, H. T. ... Mar 55
Watson, Dr. W. F. ... Feb 18


## Newsbriefs

### Agreements, Acquisitions and Deals


Allied Polymer/Robert Woodson ... May 9
Avon/Creators ... May 10
Avon/Lippiatt Hobbs ... July 9
BTR/Fatati ... Nov 9
BTR/Guthrie ... June 10
Badger and ISR cancel styrene plant arbitration ... June 10
Balfour/Harrisons & Crosfield Sept 9
Barbe/Hardman & Holden ... May 10
Bayer/Rudex ... June 10
Dowty/Reinz Dichtungs ... June 10
Dowty/SECA ... May 10
Dunlop in joint road-surface development ... July 9
Dunlop/Trelleborg ... June 10
English China Clays/Queensgate Whitings ... May 9
Guthrie/Durie and Miller ... Sept 9
Guthrie/Hochelaga Investments ... May 9
Henley/Arnco ... Nov 9
Howe Richardson ... July 9
Mackay Bowley/Finlays ... Dec 55
Metzeler/Bayer ... Dec 56
Montedison/Bayer ... Sept 9
Marbon/Vinyl Products part Oct 23
NRPRA/Sumitomo ... May 10
Pirelli flooring ... May 10
Standard/Polysar ... Nov 9
Uniroyal/Holmar ... July 9
Warne/Codan ... May 10


### Conferences, Exhibitions, etc


Adhesives ... Feb 8
Fire protection ... Feb 8
Fluid sealing ... July 9
Institution of the Rubber Industry/Society of Chemical Industry ... Aug 9
International Reclamation and Disposal Exhibition ... Jan 8
Interplas ... Jan 8
Intersat ... Jan 8
Natural rubber in engineering ... Feb 8
New flexible polymers and crosslinks ... Mar 46
Symposium on Recent Advances in Rubber testing June 8
Use of urethanes in furniture Mar 46
Use of urethanes in the automotive industry ... Sept 60


### Company news and comments


Air Products/Rutital ... Mar 9
AKZO/Novadel ... Apr 10
Albright & Wilson move ... Aug 9
Alfa Rubber ... May 9
Algerian butadiene ... Sept 9
Allied Medical Polymers ... June 10
Allied Polymer Group ... Feb 8
Allied Polymer expands ... May 9
Allied Polymer regroups ... Dec 56
Ambersil expansion ... May 9
Angus GmbH ... Mar 9
Australian clay plant opens in Victoria ... Nov 9
Avon closure ... Feb 8
BAL/Polypac BAL Ltd ... May 8
BP's new division ... Apr 10
BP sales ... Apr 8
BTR Belting and Hose ... Sept 60
BTR storage ... Dec 9
BTRL agency ... Jan 8
BTRL Ireland ... May 9
BTRL rationalisation ... Apr 10
Baker Perkins Ltd move ... Jan 7
Bayer glycols ... Dec 9
Bayer Leverkusen hold-up on tpa ... Apr 10
Bayer/Rhein-Chemie ... Feb 8
Binks-Bullows ... Feb 8
Border Chemicals expands . May 9
British Vita ... Mar 9

Butler Smith Associates Ltd ... Jan 7
Cable order, Pirelli Enfield ... Apr 16
Cab-O-Sil agency ... Jan 8
Canadian underlay firm ... Apr 10
Colikem Ltd moves ... Jan 7
Crewe Chemicals Ltd ... Jan 7
Daniels Hamilton Machinery Services ... Jan 7
Deutsche Goodyear expands ... May 9
Dunlop/Biltrite ... Feb 8
Dunlop in NS oil ... Apr 10
Dunlop Oil & Marine expands ... May 9
Du Pont's Elastomer Chemicals Department ... Jan 7
Efco/Oxy Metal Finishing ... May 8
Finnish latex ... Aug 9
Goodrich disc brakes ... Oct 9
Grantham Rubber Machinery Co. ... June 10
Hardman and Holden agency ... Apr 10
Harrison/Baker ... Feb 8
Hi-Flex moves ... Aug 9
ISR polypropylene ... Dec 9
Kronos Group ... Jan 8
Lorival ... Oct 9
Marles-Kuhlmann-Wandotte ... May 9
Michelin tyre ... Dec 9
Midland/Dow Corning ... Feb 8
Miles Redfern ... June 10
Mobay TDI ... Sept 9
Monsanto ... Jan 8
Monsanto r & d move ... Sept 60
Moseley Rubber ... May 9
Motorway Tyres opens new branch ... Nov 9
Nitrile / black masterbatch from BP ... Oct 9
Philblack Ltd move ... Jan 7
Phillips distributor ... Mar 9
Pirelli Ltd moves ... Jan 7
Polymer Corporation ... Jan 7
Poppe Rubber Co. Ltd ... Mar 9
RAPRA appoints agent in France ... Nov 9
Revertex plant ... Jan 8
SBCF backs Polyfleet ... Apr 10
Spanish nitriles ... Dec 9
Stanton agency ... Apr 10
Sumitomo Bayer Urethane Co. Ltd ... Aug 9
Swedish sbr ... Sept 9
Symington, William & Sons Ltd ... Jan 7
Uniroyal offices ... Mar 9
Vitafoam Australia ... Jan 7

**Equipment**
Belt splicer ... Dec 9
Bench presses ... Dec 9
Black handling ... July 8
Blank cutter ... Apr 8
Controllers ... Mar 8
Cross-slitter ... Apr 8
Degasser ... Mar 8
Drum heaters ... Nov 8
Flame tester ... May 8
Flame tester ... June 8
Fluid beds ... Sept 8
Foam machinery ... June 8
Microwave heaters ... Aug 8
Mixer control ... Aug 8
Peristaltic pump ... Sept 8
Plasticiser ... Feb 7
Cooling rack ... Feb 7
Presses ... July 8
Presses ... Nov 8
Rheovibron ... Aug 8
Sealant applicator ... Aug 8
Seal tester ... Mar 8
Sheet controller ... Mar 8
Solid tyre press ... Dec 8
Spectrophotometers ... Mar 8
TC apparatus ... Dec 9
TDI detector ... May 8
Thermostatic bath ... Nov 8
Tyre shredder ... July 8
Web cutters ... June 8

**Literature**
Air Products—Deflashing ... Jan 7
AKU—rubbers ... July 8
Avon golf grips ... Aug 9
BP Chemicals ... July 8
BP Chemicals pvc ... Sept 8
BP rubbers ... Aug 9
British Association of Synthetic Rubber Manufacturers—Not from trees alone ... Mar 9
Butakon nitrile—Revertex ... Mar 9
Chamberlain Mottors ... July 8
Controls, Taylor Instruments ... Dec 56
Crewe Chemicals ... July 8
Defoamers, Nopco Hess ... May 10
DSM sbr ... Nov 9
Dunlop Belting ... Jan 7
Dunlop conveyors ... July 9
Dunlop solid tyres ... Aug 9
Du Pont—Hytrel ... Jan 7
Filler applications ... Nov 8
Filler blends—English China Clays ... May 10
Fluid seals ... Nov 9
Fogg & Young Presses ... Sept 8
GEC-Elliott Thermocouples ... Sept 8
Grinding equipment ... Sept 9
Jacobsen Van Den Berg products ... Aug 8
Latices, BP Chemicals ... May 10
Metrication Board SI units ... Sept 9
New tyre repair standard ... May 16
Oil Seals ... Feb 7
Plasticisers, BP Chemicals ... Dec 56
Polybutenes, BP Chemicals ... May 10
Printed circuits ... Aug 9
Process Instruments — Foxboro-Yoxall ... Mar 46
Pye equipment leasing ... Sept 9
Revertex latices ... July 9
Revertex latices ... Aug 8
Revertex latices ... Oct 8
Sealant compounding—Thiokol ... Mar 46
Shaw exports ... Aug 9
Talc—Rogers and Cooke ... Mar 9
Test equipment guide ... Oct 8
Uniroyal products ... July 10
Unisol—ISR ... Mar 46
Weighers, Avery ... June 10
Winnofil and polymers ... Nov 8

**Materials**
Adhesives ... Feb 7
Antioxidant ... Nov 8
Bacteriostat ... May 8
Blowing agent dispersion ... Nov 9
Bonding agents ... Apr 8
Coloured rubber ... Dec 8
Dispersions Breamhurst ... Dec 8
Dispersions International Colloids ... Dec 8
Epdm bonding agent ... Oct 8
Fatty amines ... Aug 39
Fillite ... Sept 8
Flame retardant ... Oct 8
Flame retarders ... May 8
Garomag, curing aid ... May 8
High temperature adhesive ... Nov 8
Mistron Vapor ... Oct 8
NR latex ... Sept 8
Organo-metallics ... Dec 8
PCB substitutes ... Apr 8
Petroleum resin ... May 8
Pigments ... Nov 8
Polybutenes ... July 8
Release agent ... Aug 39
Silicone rubber ... Jan 7
Silicone rubbers ... June 8
Spun-bonded pp ... Jan 7
Thermoplastic rubbers ... Dec 8
Urethanes Monothane ... Dec 8
Urethanes Thiokol ... Dec 8
Water soluble polymers ... Oct 8
White fillers ... June 8

**Orders, Contracts and Exports**
Avonseal equipment ... Mar 9
Bicycle tyre plant ... Nov 9
Cable machines ... Dec 9
Cables ... Feb 7
Ducting ... Feb 7
Dunlop ... May 10
Dunlop ped ... Dec 9
Ferranti/Simon Carves ... May 10
Flooring exports ... Mar 9
Fogg and Young ... July 9
Grg exports ... Sept 60
Magnacure ... Dec 9
Mixers ... Feb 7
Pirelli ... Sept 60
Pirelli/BICC cables ... Oct 9
Pirelli Enfield ... May 10
Pirelli Enfield cables ... Oct 9
RAPRA ... Feb 7
Sports flooring ... Nov 9
Train suspensions ... Mar 9
Unisol ... Dec 9
Viking foam plant ... Nov 9
Weir Group ... July 9

**Prices**
Carbon blacks ... Jan 7
Carbon black price drop ... Apr 16
Ethylene vinyl acetate ... June 10
Pva, BP Chemicals ... Feb 7
Terylene cord—ICI ... Feb 7

**Products**
Airframe bulkhead seal ... Oct 8
Avonseal for gas pipes ... Jan 8
Backing compounds ... Oct 8
Battery sealant ... Sept 8
Bridge bearings ... May 8
Building seals ... June 8
Carpet latices ... Oct 8
Dredger hose ... Feb 7
EPDM bumpers ... May 8
Foam filters ... June 8
Foams, Dunlop Semtex ... Aug 8
Helicopter blade sheaths ... Oct 8
Hovercraft fabrics ... Mar 8
Hovercraft spares ... Jan 8
Liferaft ... Oct 8
Lined grp pipes ... Apr 8
Neomorphic foams ... Dec 8
Nephravon ... July 8
Metric O rings ... Dec 8
Printer's blanket ... July 8
Reinforced hoses ... May 8
Remoulds ... Aug 8
Remoulds ... Sept 8
Rubber/ceramic seal ... Apr 8
Safety footwear ... Sept 8
Sports surfaces ... May 8
Tyres, Avon ... Mar 8
Tyres, Avon ... Apr 8
Tyres, Goodyear ... Mar 8
Tyres, Goodyear low-profile ... Mar 8
Tyres, Pirelli ... Aug 8
Underlay ... Sept 8
Uni-Turf ... Mar 8
Welded rubber ... May 8
Wiper seals ... Apr 8

**Services**
Coatings ... Nov 8

**Standards**
Belting ... June 10
Foam tests ... June 10
Hoses ... Aug 9
Low temperature tests ... Oct 9
Seal compatibility ... Oct 9
Testing and wire ... Sept 9
BS 903-ISO ... Mar 9


## News in Camera


APG secures order for floating oil hose for Borneo ... May 23
Avon Rubber extends tyre range ... Sept 50
Avon tyres for undersea cable laying equipment ... Feb 27
BP's Baglan Bay pvc plant ... Jan 20
BTR de-icing equipment for Red Devils ... July 41
BTR rubber seals for sea dredger valves ... Oct 27
BTRL rubber lining for crystalliser vessel ... Jan 21
Barwell's latest preformer ... Mar 50
Bayer's Vulkollan used in Swedish mining trucks ... July 40
Chairmobile have Dunlop platforms ... July 41
Dunlop belt helps Transit set record ... Aug 22
Dunlop conveyor belts at smokeless fuel plant ... June 15
Dunlop design racing tyre in five months ... Oct 26
Dunlop produces toothed belts ... Mar 51
Dunlop PRD solves plating problem ... Sept 51
Dunlop returns to golfing footwear scene ... Nov 42
Dunlop Speke install flowline ... Feb 27
Dunlop supplying seals and diaphragms for Ranco car heating system ... Dec 35
DuPont Adiprene used in Milan Airport conveyors ... Nov 43
Duthane components on slush clearer ... Oct 27
Dynamic ozone test by RAPRA/Hampden ... Aug 23
Europa—Goodyear airship ... Jan 21
Europa airship makes maiden flight ... Apr 23
541 miles of Du Pont Neoprene seal ... Jan 20
Firestone supplying painted rubber panels to Detroit car makers ... Dec 35
First bulk shipment of Uniroyal paper coating latex ... Dec 34
German steel belt factory in production ... Sept 51
Goodyear car tyres for planes ... June 15
Goodyear designs artificial heart ... June 15
Goodyear Super Single tyres fitted to Guinness tankers ... May 22
Greengate & Irwell cables used in floating dock ... Sept 50
Guix internal mixer in Retreating Equipment's compounding plant ... Dec 35
Hi-Flex hose for ship-to-ship replenishment ... Mar 51
Hypalon coated grilles for Vatican ... Mar 50
LSD process for Polymer ... Nov 43
Lord Hewlett introduced to House of Lords ... July 40
Lord Snowdon visits Avon factory ... June 14
Metzeler enters leisure boat market ... Sept 51
NR latex on M1 motorway ... Jan 21
New conveyor hose system ... Nov 43
New gauges in Philblack's pollution drive ... Aug 23
New HQ for Natural Rubber Producers Research Association ... Dec 34
New injection press ... July 41
New instrument from RAPRA ... Mar 51
New livery for Allied Polymer transport vehicles ... Dec 34
New mixer from RAPRA ... Apr 23
Pirelli uses Pooley bench scales ... Dec 35
Pirelli visited by Chinese study mission ... May 23
Polysar latex plant on stream ... Feb 26
Pressurised fluid bed in production ... June 14
Protective suit for ammonia ... Apr 23
Queen visits RRIM experimental station ... Apr 23
£¼m worth of butyl sheet silos exported ... July 40
RAPRA fluid bed shown at open day ... July 41
RPPITB courses for P. B. Cow workers ... Feb 26
Smokeless, steam-raising tyre incinerator ... Oct 26
A. Soden leaves RAPRA after 35 years ... Feb 26
Swiss post office uses neoprene aerial covers ... May 23
350% increase in sales of synthetic rubber gloves ... Nov 42
Tie-bar testing at Miles Redfern ... Aug 22
Tyre clamp handles 107in dia assemblies ... Apr 22
UK's largest tin mine uses BTR belting ... Nov 43
Uniroyal 500-gallon pilot plant ... Mar 50
Viking sells foam line to US ... Nov 42
Vredestein conveyor moves iron ore ... May 22
W & P mixer base of new PVC plant ... Oct 27
World Technical Conference at Dunlop ... Aug 23


## Scene from Japan


Technology deals and know-how agreements reach new high ... Jan 35
Japs hive-off rubber plants to spread the trading load ... Feb 12
New materials, new plants, but a warning of decline ... Mar 52
Nippon Alfin is dissolved ... Apr 44
A tough time coming for sr exporters ... Apr 44
Pressure on the price of nr pushes sbr price to lowest point ... May 20
Aggressive move in tyre sector worries Japanese ... June 30
More sbr on the way—mostly from Mitsubishi ... July 14
Joint plant sanctioned for polyisoprene ... Aug 14
Structural change in Japan's synthetic rubber manufacturing industry ... Sept 14
Chinese rubber mission to visit Japan ... Oct 23
Moratorium on ethylene plants will continue until March 1975 ... Nov 39
Japan ties up with US firms to gain foothold in America ... Dec 38


## The Soviet Scene


Accelerators ... Jan 24
Acrylamide—new vulcanising agent for sbr polymers ... Apr 40
The addition of sbr and vpr to polybutadiene ... July 17
Ageing of carbon blacks and effects ... June 18
Blending materials ... Jan 24
Blends of natural rubber and nitrile with 40% acm content ... Nov 13
Building tack investigations ... May 16
Copolymer blends with sbr ... Oct 18
Crosslinked nitrile rubbers ... Aug 12
Curing thermodynamically incompatible rubbers ... July 16
Determination of antioxidants from elastomers ... Mar 26
Effects of antioxidants in polychloroprene latex films ... Sept 18
Effects of isocyanate treatment of polyester fibres ... Dec 16
Effects of sunlight on unstressed vulcanisates ... June 18
Effects on nylon-polychloroprene bonds ... Jan 26
Factors of creep of tyre tread rubbers ... May 14
40 years of progress in sr production ... Sept 16
Fungus resistance of compounds ... Oct 18
High temperature cure systems ... July 16

Hydrogen bond formation on vulcanisation and oxidation June 17
Improving properties of butyl compounds ..... Oct 16
Ingredient effects on wire/rubber bond strengths ... July 17
Investigation of crosslinked rubbers ..... Nov 13
Investigation on solution-polymerised sbrs ..... Mar 22
MBT used with phenolic anti-oxidants in polyisoprenes July 17
Measuring specific surface of powders ..... Dec 16
Nitrile rubber with 50% acn Mar 26
Nitroso compounds used as adhesion promotors ..... Aug 13
Non-destructive testing of rubber ..... Oct 18
Non-staining antioxidants ... Oct 16
Oil resistant compounds ... Feb 16
Optimum reinforcement of nitrile rubber ..... Dec 15
Ozone resistance of tread rubber blends ..... Nov 14
Polybutadienes prepared from blends of three different materials ..... Dec 15
Problems of bonding fluoro vulcanisates ..... Sept 18
Processing behaviour of sulphur-modified polychloroprene ..... May 13
Resilience changes with temperature and crosslinking ..... Feb 16
Resistance of elastomers to liquid and vapour Freons Feb 14
Reversion-free vulcanisates . May 13
Search for low temperature polymers ..... Aug 12
Search for triethylaluminium resistant elastomers ..... Mar 22
Service temperature of nitrile rubbers ..... May 14
Solubility of antioxidants in raw rubbers ..... Apr 40
Stereoregular rubbers containing carboxyl or ester groupings ..... Sept 16
Thermal properties of components of v-belts ..... Dec 15
Thermoplastic rubbers based on block copolymers ..... Aug 13
Toxicity of antioxidants based on ppd ..... June 17
Use of cupric sulphide as a vulcanising agent ..... Nov 13
Use of ethanolamine in the curing of polychloroprenes Apr 40

**Materials Prices**

Dec 57

**Views and Reviews**

Jan 39
Feb 33
Mar 28
Apr 15
May 77
June 33
July 18
Aug 17
Sept 45
Oct 56
Nov 52
Dec 53